

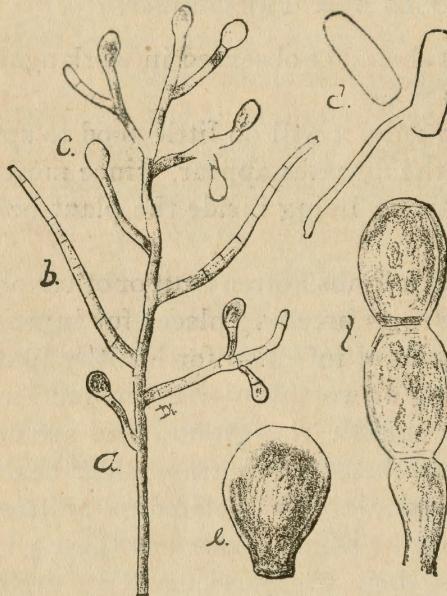
THE MARYLAND
AGRICULTURAL EXPERIMENT STATION
STATE HORTICULTURAL DEPARTMENT.

CIRCULAR BULLETIN No. 38.

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Spring Advice about Fruit Diseases.

By J. B. S. Norton, State Pathologist.



*Highly magnified portions
of a fungus.*

Last year a great deal of loss was occasioned to fruit growers in Maryland by such diseases as Brown Rot, Leaf Curl and Yellows of Peach; Rust, Rot and Scab of Apples, Blight of Pear, Apple and Quince; Black Rot and Mildew of Grapes; the various leaf and fruit spots and many others of minor importance.

This loss might have been greatly reduced by careful attention and use of preventive measures.

While it is impossible to predict what diseases will

be prevalent this year, experience shows that it is profitable to be prepared against those serious diseases which are apt to occur at any time and one or more of which are certain to do injury each season.

This Department has been giving information in the past few years on the treatment of many fruit diseases, and it is the object of this circular to call attention again to the circulars and bulletins sent out in the past, and to bring to mind the importance of commencing treatment at the beginning of the season, if these diseases are to be controlled.

Prompt energetic treatment begun early in spring will save much loss from fungous diseases, but to be of value, such work must be thorough and persistent and not done in a haphazard manner.

GENERAL RULES FOR TREATMENT.

The following points should be observed in work against plant diseases in general:

- (1) Begin early. As a rule it will do little good to spray or otherwise treat after the diseases appear, since most of the fungi causing disease are living inside the plant before their effect is manifest.
- (2) Destroy dead trees or limbs, rotten fruit or other plant remains, which may serve as breeding places for injurious fungi or insects or as sources of infection for healthy plants.
- (3) Do not allow dying or worthless trees to stand in or near an orchard. They cumber the ground and are more susceptible to diseases, which they may transmit to healthy trees. Wild trees, in particular those related to cultivated ones, often are affected by the same diseases as those which attack cultivated trees, so their presence near an orchard may sometimes be detrimental.
- (4) Do not allow large wounds to remain unprotected, and avoid unnecessary injury to the bark. It is much more easy for injurious fungi to enter in such places, besides disturbing the health of the tree in other ways.
- (5) Keep out injurious insects. Besides their own injur-

ies, they may introduce the spores of fungi into healthy tissue.

(6) Spray with compounds detrimental to fungi to prevent their growth into portions of the tree or its fruit. Bordeaux mixture is the standard fungicide for most purposes.

(7) In planting, use sound, vigorous trees, taking particular care that the roots are free from knots or galls, and where possible, grow varieties least susceptible to disease.

(8) Keep trees in healthy condition by proper culture, fertilization and pruning.

(9) Whenever possible, rotate crops with others not subject to the same diseases.

These methods of treatment will, of course, vary with the crop and the different diseases. The labor and expense that could be profitably spent in combating diseases will also depend on local labor and market conditions.

NOTES ON SOME IMPORTANT DISEASES.

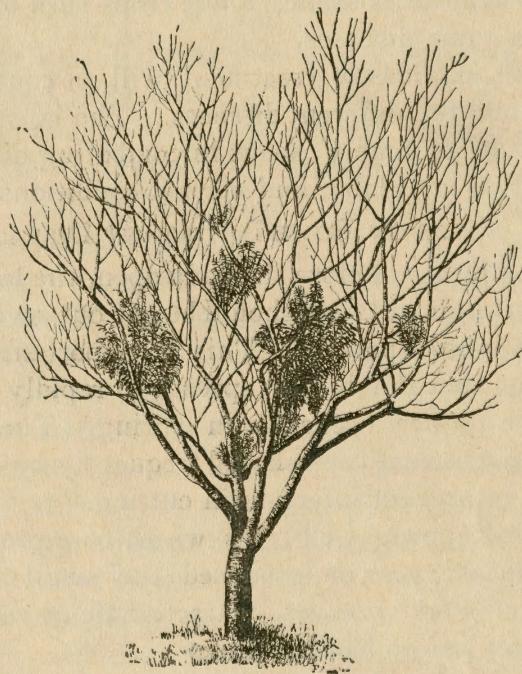
Pear Blight. Before the buds open, the last vestiges of last year's blighted twigs should be cut out several inches below the blighted portion. This is important, as it is from these twigs that the blight spreads so rapidly in the pear, apple and quince orchards in spring. The blade of the pruning instrument used should frequently be dipped in carbolic acid to prevent infection in cutting.

Peach Yellows. All trees which bore prematurely ripened fruit last year or produced the small narrow-leaved shoots or clusters of leaves, characteristic of yellows, should be destroyed before blossom time.

Apple leaf and fruit diseases can be most profitably controlled by spraying with Bordeaux mixture and much of the well known dropping, spotting and rotting of the fruit prevented. This spray will also prevent the leaf spots of

other trees, which check growth and hinder the formation of good fruit.

Peach Leaf Curl. Spraying with ordinary Bordeaux mixture before the buds open and once afterward with a weaker Bordeaux (2-3 lbs. bluestone and 7-9 lbs. of quick lime to 50 gallons water) is very effectual against this disease. The peach foliage is, however, sometimes injured by the Bordeaux mixture, when it is applied when the peach is in leaf. For Brown Rot of Peach, see circular 39.



Peach tree with Yellows.